

Delaware Public Health Laboratory BT update

October 2013

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CDC Select Agent Program

- “Select agents and toxins are a subset of biological agents and toxins that the Departments of Health and Human Services (HHS) and Agriculture (USDA) have determined to have the potential to pose a severe threat to public health and safety, to animal or plant health, or to animal or plant products”.
- CDC oversees the Select Agent Program (SAP), which regulates the laboratories which may possess, use, or transfer select agents within the US.
- Established by USA PATRIOT Act and the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, enacted after September 11, 2001 attacks and the 2001 anthrax attacks.



DPHL

- 10/ 2012, CDC SATP updated regulations
 - Tiering of select agents
 - Suitability assessments-Credit, personality,etc
 - Increased security and safety- Intrusion detection systems
 - 15 minute response time
 - DPHL chose to not maintain Tier 1 agents
 - Does not affect our ability to confirm Select agents- destroy in 7 days



LRN

The Laboratory Response Network

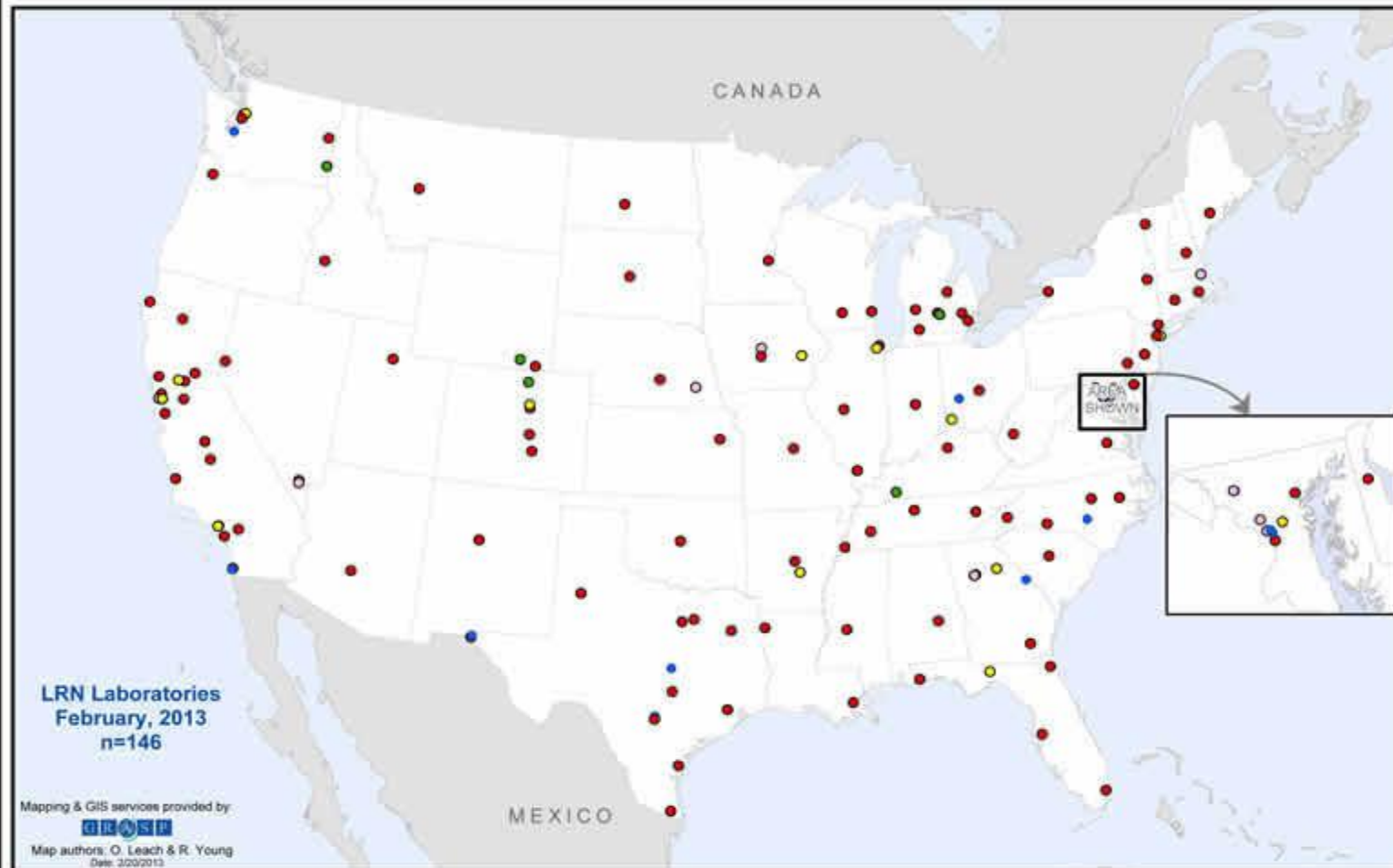




LRN Coverage



National Center for Emerging Zoonotic and Infectious Diseases
Division of Preparedness and Emerging Infections
Laboratory Preparedness and Response Branch



Legend

- Public Health (102)
- Military (13)
- Federal (11)
- Food (15)
- Vet (5)

LRN Laboratories
February, 2013
n=146

Mapping & GIS services provided by:



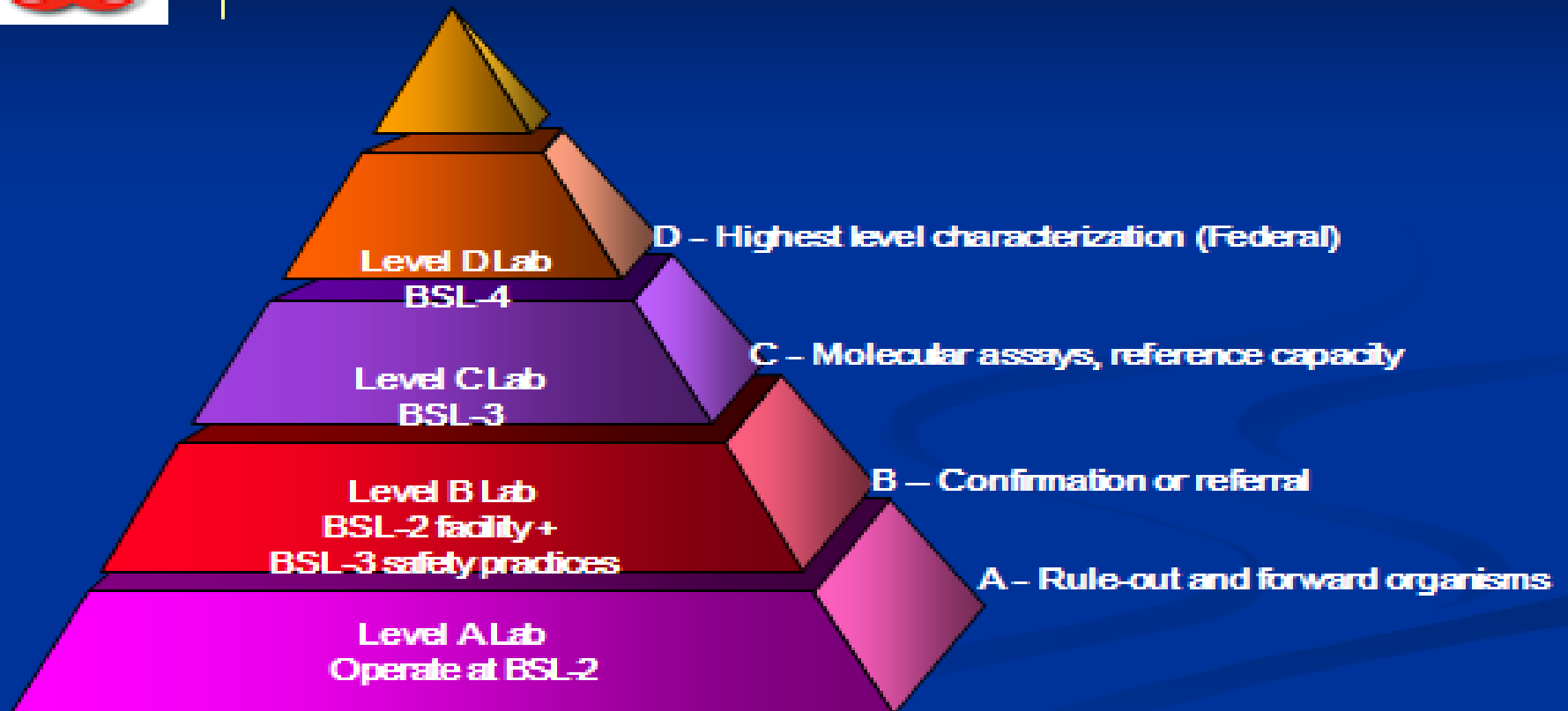
Map authors: O. Leach & R. Young
Date: 2/20/2013



LRN PYRAMID



The Laboratory Response Network





Biosafety Level 3 lab





Bioterrorism testing

- BT agents
 - *Bacillus anthracis*, *Brucella* sp., *Francisella tularensis*, *Yersinia pestis*, *Burkholderia* sp.
 - *Coxiella*, *Varicella*, *Orthopox*,
 - Ricin, *Clostridium botulinum*
- Unknown FBI Screening Protocol –Powders, letters and environmental samples- 7 target agents
- Clinical samples – blood, sputum, bronchial washings, cerebral spinal fluid
- Clinical isolates from microbiology labs
- Post office specimens



Influenza & Resp.Virus

- Influenza A
- Influenza B
- H1N1, H3N2, H3N2v
- H7N9- new strain, seen in China 2013
- H5N1- avian flu
- Middle Eastern Respiratory Syndrome- (MERS CoV) 4/2013
- Respiratory Virus Panel – 12 viruses



Foodborne Disease Testing

- Salmonella
- Shigella
- Vibrio
- Listeria
- Shigatoxin E.coli
- Norovirus
- Bacillus cereus
- Staphylococcus aureus
- Bioterrorism & toxin agents in food or clinical specimens

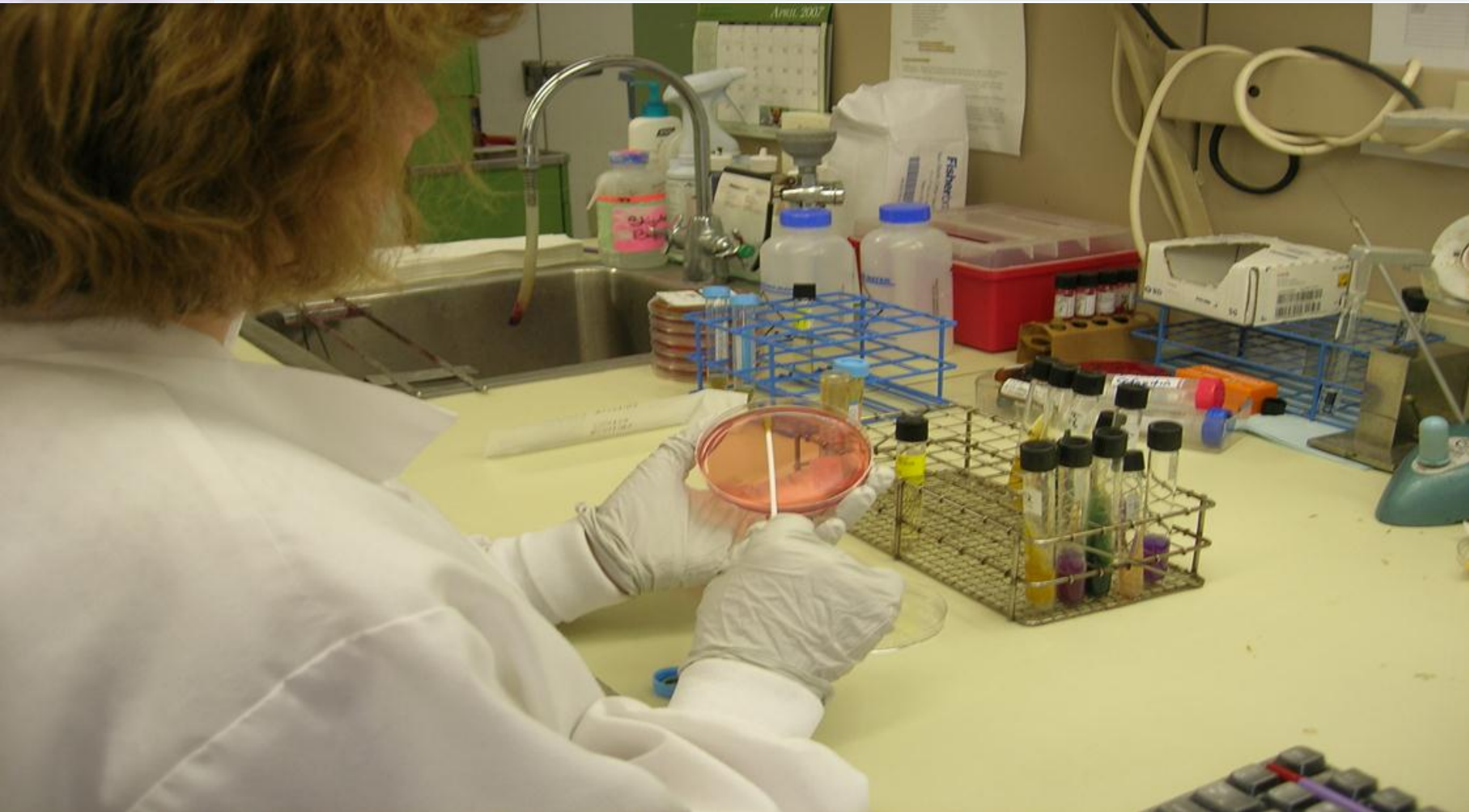


Infectious Disease testing

- Pertussis
- Measles
- Mumps
- Mycobacterium tuberculosis complex(MTB)
- BT agents (naturally occurring)- Brucella, Francisella, coxiella, varicella, etc.
- Arbovirus- EEE, WNV
- For more information visit our webpage
<http://www.dhss.delaware.gov/dph/lab/labs.html>



Microbiological cultures





PHEP Funding

- 2005- present
 - BSL 3+ lab & equipment
 - Culture vs. Molecular testing – 2-3 days to 2 hrs
 - Laboratory Information Management System (LIMS) & HL7 reporting
 - DNA fingerprinting (Pulsed Field Gel Electrophoresis (PFGE)) PulseNet & CaliciNet
 - Molecular Sequencing- unknown organisms
 - Increased security, registration, monitoring & background checks



Exercises and Outreach

- Full Scale Exercises – Operation Loose Package
- Sentinel lab training- wet workshops
- HazMat Conference & Preparedness Summit
- Association of Public Health Laboratories (APHL) Annual Meeting and Environmental Laboratory Conference
- Biannual Lab Preparedness Advisory Committee (LPAC)
- LabWeek Open House - Joint with EMSPS
- First responder's and chain of custody training
- Packaging & shipping for infectious materials



CDC improvements

- New labs & equipment
- LRN –Standardized protocol & reagents
- Surge capacity in the network
- Emergency Use Authorization (EUA)-
 - 1st used for H1N1
 - Bypass FDA approval for validation of new methods
 - State labs- able to confirm w/in 7 days
 - Using for new threats now (MERS-CoV, H7N9)



Questions or Comments?

